CLAIMS

1. Cell composition containing macrophages, presenting anti-infectious and hematopoietic properties.

2. Cell composition containing macrophages, myeloïd cells and progenitor cells, with said progenitor cells being preferably present in a ratio of at least about 0,1 %, preferably about 0,1 to 20 %, with said myeloïd cells being preferably present in an amount of about 10 % to about 30 %, with said macrophages being preferably in an amount of about 10 to about 60 %, these percentages being expressed with respect to the total number of cells.

3. Cell composition according to anyone of claims 1 or 2, containing T lymphocytes, preferably in a ratio of about 10 to 60 % expressed with respect to the total number of cells.

4. Cell composition according to anyone of claims 1 to 3, wherein the progenitor cells contain from about 0,1 % to about 20 % of $CD34^+$ stem cells, expressed with respect to the total number of progenitor cells.

5. Cell composition according to claim 4, wherein the progenitor cells are generated from and possibly included in peripheral blood mononuclear cells, and in particular are chosen among :

myelo-erythroïd progenitor cells, myeloïd progenitor cells, lymphoïd progenitor cells or a mixture thereof.

6. Cell composition according to anyone of claims 1 to 5, wherein the macrophages, myeloïd cells and the lymphocytes if present, are included in/or generated from blood mononuclear cells.

7. Process for the preparation of a cell composition containing macrophages, myeloïd cells and progenitor cells, with said progenitor cells being preferably present in an amount of about 0,1 % to about 20 %, with said macrophages being preferably in an amount of about 10 to about 60 %, these percentages being expressed with respect to the total number of cells, comprising the step of mobilization the progenitor cells in the blood of a patient, for instance by premedication of said patient with G-CSF and/or GM-CSF, or G-CSF and cyclophophosphamide, thus increasing the amount of progenitor cells in peripheral blood.

8. Process according to claim 7, comprising an additional step of coculture of the blood mononuclear cells and progenitors, after washing off the platelets, the granulocytes and erythrocytes, for about 4 to about 10 days, in a medium allowing differentiation of monocytes into macrophages and myeloïd progenitors into polynuclear cells.

9. Process according to claim 8, wherein the coculture is carried out in the presence of cytokines or growth factors, for example : IL3, IL6 stem cell factor, EPO, trhombopoitein, GM-CSF, G-CSF, Flat-3 ligand, C-kit ligand or their agonists.

10. Process according to anyone of claims 8 or 9, comprising an additional step of macrophage activation, at the end of the coculture, for instance by addition of γ-interferon or muramyl peptides.

11. Process according to anyone of claims 6 to 10, comprising an additional step of concentration of the cells obtained at the end of the coculture, and resuspension in a vehicle suitable for administration to a patient.

12. Process according to claim 11, comprising, after the resuspension of the coculture, a step of freezing part or the totality of the resuspension.

Sub a 6

13. Cell composition such as obtained according to the process of anyone of claims 7 to 12.

Sub a 7

14. Pharmaceutical composition containing, as active substance, a cellular composition according to anyone of claims 1 to 6 or 13.

15. Cell composition according to anyone of claims 1 to 6 or 13, charaterized by the fact that it is derived from and/or included in a peripheral blood mononuclear cell composition containing :

Sub a 8

- from about 10 to about 50 % of monocytes,
- from about 10 to about 70 % of lymphocytes,
- from about 0,1 to about 20 % of progenitor cells,
- from about 1 to about 50 % of polynuclear cells,
- from about 0,1 to about 20 % of stem cells.

Sub a 9

16. Use of a cell composition according to anyone of claims 1 to 6 or 13, for the preparation of drugs, for the restoration of hematopoiesis in an aplasic patient and/or the protection of patients against infectious diseases or against residual tumors.

add a 10

add c 12

add 4